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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/802,168	03/17/2004	Yoshiteru Tsuchinaga	FUJY 21.045	4144
26304 7590 01/24/2008 KATTEN MUCHIN ROSENMAN LLP 575 MADISON AVENUE NEW YORK, NY 10022-2585			EXAMINER HAN, QI	
			ART UNIT 2626	PAPER NUMBER
			MAIL DATE 01/24/2008	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/802,168	Applicant(s) TSUCHINAGA ET AL.	
	Examiner Qi Han	Art Unit 2626	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 November 2007.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) 11-20 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 March 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. This communication is responsive to the applicant's response (to the restriction requirement) filed on 11/08/2007.

Election/Restrictions

2. Applicant's election without traverse of invention Group I, claims 1-10 in the reply filed on 11/08/2007 is acknowledged.
3. Claims 11-20 withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention Group II, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 11/08/2007.

Specification and Drawing

4. The disclosure is objected to because of the following:
 - a. Figures 1-5 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required

corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

b. Fig. 7A, the text "STATRE" on the left appears to be "STATE". Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1, 3, 5-6, 8 and 10 are rejected under 35 U.S.C. 102(e) as being anticipated by GOPALAN et al. (US 2003/0176934 A1) hereinafter referenced as GOPALAN.

As per **claim 1**, GOPALAN discloses 'method and apparatus for embedding data in audio signals' (title), for 'Linear Predictive Code (LPC)-10 model (speech encoding/decoding method including coding/decoding speech code)' (p(paragraph) 25), comprising:

"an embedding judgment unit, (for) every speech code, to judge whether or not data should be embedded in the speech code" (Fig. 1 and p12, mechanism for 'computing the masker frequencies and their power levels on frame-to-frame (corresponding to every speech code) basis; determining (judge) a global threshold of hearing at each said masker frequency...obtaining the sound pressure level for quiet, below which a signal is inaudible (to

judge whether or not data should be embedded in the speech code)'; also see Fig. 1, '155', p22 and p27); and

"an embedding unit to embed data should be embedded in two or more parameter codes, defined as embedding object parameter codes, of a plurality of parameter codes constituting the speech code for which it is judged by the embedding judgment unit that the data should be embedded" (p10, a mechanism for 'embedding binary data (object parameter codes) in audio signal', 'the magnitude (parameter) of the power spectrum at the perceptual holes of each frame of a host speech utterance' and 'phase spectrum (parameter) at perceptually masked spectral points of each frame of a host speech utterance' may 'be altered so as to embed digital data'; p25, 'Linear Predictive Code (LPC)-10 model', 'DCT' and Fourier-Bessel coefficients (each of them corresponds a parameter code), may be used for embedding', which read on claimed parameter codes constituting the speech code; also see Fig. 1, p23 and p26-p27).

As per **claim 3**, it recites a data extraction device that simply performs the reversed operations of claim 1. The rejection is based on the same reason described for claim 1, because it also reads on the limitations of claim 3 (also see Fig. 1, '200-220').

As per **claim 5**, it recites a data embedding/extraction device. The rejection is based on the same reason described for claims 1 and 3, because the claim recites the same or similar limitation(s) as claims 1 and 3.

As per **claims 6, 8 and 10**, they recite methods. The rejection is based on the same reason described for apparatus claims 1, 3 and 5 respectively, because the claims recite the same or similar limitations as claims 1, 3 and 5 respectively.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 2, 4, 7 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over GOPALAN in view of CHIU et al. (US 2004/0220803 A1) hereinafter referenced as CHIU.

As per **claim 2** (depending on claim 1), GOPALAN does not expressly disclose “the embedding judgment unit, for every frame defined in accordance with the speech encoding method, judges whether the frame is a frame of a **speech** section, or a frame of a **non-speech** section, and the embedding unit executes a process for **embedding data** in a speech code of the frame judged to be the frame of a **non-speech** section”. However, the feature is well known in the art as evidenced by CHIU who discloses ‘method and apparatus for transferring data over a voice channel’ (title), comprising ‘encoding (embedding) data traffic as a transmit voice frame’ (abstract and p11-p12), ‘detect silence (non-speech section)’ and ‘insertion of a voice frame with data (embedding data in a speech code) and the predetermined vocoder parameter’ (p28), ‘voice frames with data encoded (embedded) that have been inserted in area where silence or no voice frame (frame of non-speech section) was detected (p32 and Fig. 4), ‘LPC vocoder (speech encoding method)’ (p35). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify GOPALAN by providing using silence speech frame for encoding (embedding) data, as taught by CHIU, for the purpose (motivation) of

transferring data over a voice channel and embedding data in a voice channel without affecting legacy units or infrastructure equipment (CHIU: p3 and p12).

As per **claim 4** (depending on claim 3), it simply performs the reversed operations of claim 2. The rejection is based on the same reason described for claim 2, because it also reads on the limitation(s) of claim 4.

As per **claims 7** (depending claim on 6) and **9** (depending on claim 8), the rejection is based on the same reason described for apparatus claims 2 and 4 respectively, because the claims recite the same or similar limitations as claims 2 and 4 respectively.

Conclusion

7. Please address mail to be delivered by the United States Postal Service (USPS) as follows:

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Effective January 14, 2005, except correspondence for Maintenance Fee payments, Deposit Account Replenishments (see 1.25(c)(4)), and Licensing and Review (see 37 CFR 5.1(c) and 5.2(c)), please address correspondence to be delivered by other delivery services (Federal Express (Fed Ex), UPS, DHL, Laser, Action, Purolater, etc.) as follows:

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Qi Han whose telephone numbers is (571) 272-7604. The examiner can normally be reached on Monday through Thursday from 9:00 a.m. to 7:30 p.m. If

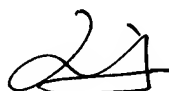
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attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richmond Dorvil, can be reached on (571) 272-7602.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Inquiries regarding the status of submissions relating to an application or questions on the Private PAIR system should be directed to the Electronic Business Center (EBC) at 866-217-9197 (toll-free) or 703-305-3028 between the hours of 6 a.m. and midnight Monday through Friday EST, or by e-mail at: ebc@uspto.gov. For general information about the PAIR system, see <http://pair-direct.uspto.gov>.

QH/qh
January 21, 2008

 1/21/08